

Patent Claims

1. A plug connector (1) for fluid conduits,  
5 comprising a housing part (2) with a plug socket (4)  
for the fluid-tight insertion of a tubular plug-in part  
(6), a holding element (14) for locking and a fluid  
seal (16) for sealing the inserted plug-in part (6)  
being arranged in the plug socket (4), and the housing  
10 part (2) being in two parts comprising a base part (24)  
and an insert part (28) which is connected to the  
latter via a snap-action positive fit connection (26),  
characterized in that the base part (24) for its part  
is likewise in two parts comprising a receiving part  
15 (60) for the holding element (14), the fluid seal (16)  
and the insert part (28) and a joining part (62) for  
the joining connection of the housing part (2) to a  
fluid conduit.
- 20 2. The plug connector as claimed in claim 1,  
characterized in that the receiving part (60) and the  
joining part (62) are connected to each other via an -  
in particular circumferentially closed - snap-action  
positive fit connection (64).
- 25 3. The plug connector as claimed in claim 1 or 2,  
characterized in that an annular gap (66) between the  
receiving part (60) and the joining part (62) is sealed  
off in a fluid-tight manner via a seal (68).
- 30 4. The plug connector as claimed in one of claims 1  
to 3, characterized in that the receiving part (60),  
with a consistently identical configuration, can be  
connected to different, adaptor-like joining parts (62)  
35 according to choice.
5. The plug connector as claimed in one of claims 1  
to 4, characterized in that the receiving part (60)

consists of plastic and the joining part (62) in particular consists of metal.

6. The plug connector as claimed in one of claims 1 to 5, characterized in that the holding element (14) is designed as a slotted, radially elastic clamping ring which interacts with an internal cone (18) in the plug socket (4) to lock the plug-in part (6), the internal cone (18) being formed in the insert part (28).

7. The plug connector as claimed in one of claims 1 to 6, characterized in that the fluid seal (16) is arranged in an annular chamber (70) between the base part (24) or the receiving part (60) and the insert part (28).

8. The plug connector as claimed in one of claims 1 to 7, characterized in that first of all the holding element (14) for locking the inserted plug-in part (6) and then the fluid seal (16) are arranged within the plug socket (4), as seen in the plug-in direction (12) starting from a dirt seal (10) on the mouth side, with a leakage path being formed in such a manner that, in a pre-locking position of the plug-in part (6), which position is locked by the holding element (14) but is not yet sealed via the fluid seal (16), a physically perceptible leakage which is delimited in a defined manner is ensured.

9. The plug connector as claimed in claim 8, characterized in that the leakage path is formed by depressions (40) which are arranged on the outer circumference (38) of the plug-in part (6) and, in the pre-locking position, are arranged firstly in the region of the fluid seal (16) and secondly in the region of the dirt seal (10).

10. The plug connector as claimed in claim 9, characterized in that the depressions (40) are arranged in two groups of in each case a plurality of depressions (40) which are distributed over the  
5 circumference and are spaced apart axially via a cylindrical fluid-sealing section (42).

11. The plug connector as claimed in claim 10, characterized in that, on the side opposite the fluid-sealing section (42), a cylindrical dirt-sealing  
10 section (46) adjoins the depressions (40) which are situated away from a front plug-in end (44) of the plug-in part (6) and are assigned to the dirt seal (10).

12. The plug connector as claimed in one of claims 9 to 11, characterized in that the depressions (40) assigned to the fluid seal (16) start from the front  
15 plug-in end (44) of the plug-in part (6).

13. The plug connector as claimed in one of claims 9 to 12, characterized in that the depressions (40) each have an elongate, in particular approximately rectangular shape oriented in the plug-in direction  
20 (12).

14. The plug connector as claimed in one of claims 9 to 13, characterized in that the axial center distance (A) between the depressions (40) corresponds at least  
30 approximately to the axial distance (B) between fluid seal (16) and dirt seal (10).

15. The plug connector as claimed in one of claims 1 to 14, characterized by means (VDS) for securing the  
35 inserted plug-in part (6) against rotation about the plug axis.

16. The plug connector as claimed in claim 15,  
characterized in that the means for the rotational  
securing (VDS) of positive fit elements (72) are formed  
in such a manner that the individual parts can be  
5 fitted axially but are secured against rotation  
relative to one another.